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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/235,156	01/22/1999	JOSHUA SUSSER	50253-219;P3	5106

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EXAMINER
BULLOCK JR, LEWIS ALEXANDER

ART UNIT	PAPER NUMBER
2126	

DATE MAILED: 02/26/2003

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application N .	Applicant(s)	
	09/235,156	SUSSER ET AL.	
	Examiner	Art Unit	
	Lewis A. Bullock, Jr.	2126	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *06 December 2002* .

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1 and 23-42* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1 and 23-42* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *06 December 2002* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

11)☐ The proposed drawing correction filed on _____ is: a)☐ approved b)☐ disapproved by the Examiner.

If approved, corrected drawings are required in reply to this Office action.

12)☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

13)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____ .

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

14)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).

a) ☐ The translation of the foreign language provisional application has been received.

15)☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) *21* .
4) ☐ Interview Summary (PTO-413) Paper No(s). _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: .

DETAILED ACTION

Information Disclosure Statement

1. The information disclosure statement filed 12/6/02 fails to comply with the provisions of 37 CFR 1.97, 1.98 and MPEP § 609 because some of the foreign documents submitted were not translated. It has been placed in the application file, but the information referred to therein has not been considered as to the merits. Applicant is advised that the date of any re-submission of any item of information contained in this information disclosure statement or the submission of any missing element(s) will be the date of submission for purposes of determining compliance with the requirements based on the time of filing the statement, including all certification requirements for statements under 37 CFR 1.97(e). See MPEP § 609 ¶ C(1).

Claim Rejections - 35 USC § 102

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

3. Claims 32 is rejected under 35 U.S.C. 102(b) as being anticipated by "Java Card 2.0 Programming Concepts" by SUN.

As to claim 32, SUN teaches a method of operating a small footprint device (Java Card), comprising the step of: separating program modules (applets) using a context barrier (applet firewall) (pg. 7, Applet Isolation, "An applet firewall prevent one applet

from accessing the contents or behavior of objects owned by other applets."; pg. 2, Multiple Applets, "However, Java Card provides...in which multiple applets can discover each other, communicate, and share data in a limited manner, while still maintaining protection from each other in the form of a firewall between applets.") and permitting access to information (method invocation) across the context barrier (applet firewall) using a global data structure (JCRE) (pg. 7-8, "However, it is necessary to allow exceptions to this restriction. The JCRE must be able to invoke methods on applets...").

Claim Rejections - 35 USC § 103

4. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

5. Claims 1, 23-31, and 33-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over "Java Card 2.0 Programming Concepts" by SUN.

As to claim 1, SUN teaches a small footprint device (java card / smart card) comprising: at least one processing element (virtual machine / operating system process) (pg. 3, Lifetime of the Virtual Machine), and a context barrier (applet firewall) running on the processing element (pg. 7, Applet Isolation and Object Sharing), for isolating program modules (applets / objects) from one another (pg. 7, "An applet firewall prevent one applet from accessing the contents or behavior of objects owned by other applets."; pg. 2, Multiple Applets, "However, Java Card provides...in which

multiple applets can discover each other, communicate, and share data in a limited manner, while still maintaining protection from each other in the form of a firewall between applets."); and a global data structure (JCRE) for permitting one program module (applet) to access information (method invocation) from another program module (applet) across the context barrier (applet firewall) (pg. 7-8, "However, it is necessary to allow exceptions to this restriction. The JCRE must be able to invoke methods on applets..."). However, SUN does not explicitly mention that the device has memory and that the context barrier uses the memory. It is well known in the art that a device has memory and therefore obvious that the device would have memory for storing program modules and other functionalities of the device.

As to claims 23-26, SUN teaches that each applet has its own context (Applet execution context) (pg. vii, Terminology) and that the applets are separated by an applet firewall (pg. 7) and an applet can access another applet and its object by the JCRE (pg. 7-8). It is well known in the art that an execution context has a memory space or name space. Therefore, it is obvious that the applets have their separate memory spaces or name spaces for each applets execution. It is also obvious that since an applet can access another applet via the JCRE that the multiple applets can access one another through the JCRE when allowed.

As to claims 27-31, SUN teaches the context barrier (applet firewall) prevents access from a principle (applet) in one context to an object in a different context (applet)

(pg. 7, Applet Isolation and Object Sharing, "An applet firewall prevent one applet from accessing the contents or behavior of objects owned by other applets."; pg. 2, Multiple Applets, "However, Java Card provides...in which multiple applets can discover each other, communicate, and share data in a limited manner, while still maintaining protection from each other in the form of a firewall between applets."). It is inherent that since the context barrier prevents object access to an applet not owning the objects (pg. 7) that the context barrier enforces a security check on the applet accessing of the object. It is obvious that the security check involves name / memory space agreement since the applet can only access objects within its execution context and it is well known in the art that an execution context has a memory space or name space.

As to claims 33, SUN teaches the applet firewall prevents one applet from accessing the contents or behavior of objects owned by other applets (pg. 7, Applet Isolation and Object Sharing) and that when one applet invokes another applet's objects, the JCRE performs applet context switch to allow the code in the objects applet to perform the method invocation operation (pg. 8, Applet Isolation and Object Sharing). Therefore, it would be obvious that the firewall prevents access from a principal to an object unless they are on the same context and unless they access the JCRE for allow the access.

As to claims 34 and 35, SUN teaches a method for permitting access to information (method invocation) on a small footprint device (java card) from a first

program module (applet) to a second program module (applet / objects) separated by a context barrier (applet firewall) using a global data structure (JCRE) which may be access by at least two program modules (applets) (pg. 7-8, Applet Isolation and Object Sharing). However, SUN does not teach the creating of the global data structure. It would be obvious to one skilled in the art at the time of the invention that the JCRE has to be created and run in order to execute in the system therefore it is obviously created.

As to claims 36 and 37, reference is made to a computer program product which corresponds to the method of claim 1 and is therefore met by the rejection of claim 1 above.

As to claims 38 and 39, reference is made to a computer program product which corresponds to the method of claim 1 and is therefore met by the rejection of claim 1 above.

As to claims 40-42, SUN teaches a context barrier (applet firewall) on a small footprint device (java card) for separating a plurality of programs (applets) on a small footprint device by running them in respective contexts (execution context) (pg. 7-8, Applet Isolation and Object Sharing) and a global data structure (JCRE) for bypassing a context barrier (applet firewall) on a small footprint device (java card) and permit one program (applet) to access information (method invocation) from another program (applet) (pg. 7-8, Applet Isolation and Object Sharing; pg. 9-10, Applet Lifetime and

Runtime Environment; pg. 8, "JCRE Privileges). It is inherent that the firewall and the JCRE has program code in order to function on the java card system. However, SUN does not teach that the code is sent over a communications link. It is well known in the art that computer code is downloaded from a developer system or server system to an implementation system or client system. Therefore, it is obvious to one skilled in the art that the code of the firewall and JCRE is shipped or downloaded from a server system to a client system.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Lewis A. Bullock, Jr. whose telephone number is (703) 305-0439. The examiner can normally be reached on Monday-Friday, 8:30 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Alvin E. Oberley can be reached on (703) 305-9716. The fax phone numbers for the organization where this application or proceeding is assigned are (703) 746-7239 for regular communications and (703) 746-7238 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is (703) 305-0286.

Lewis A. Bullock Jr

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February 24, 2003